

The Mining Journal

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LONDON, DECEMBER 25, 1953

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The advertisement features a large, dark, textured graphic of a stack of brochures or leaflets. The word 'BIRTLEY' is printed in large, bold, serif capital letters on the front of each brochure. A smaller brochure on the left side has the word 'BIRTLEY' in a stylized, blocky font. A dark, circular logo with the word 'BIRTLEY' in a serif font is located in the bottom left corner. The text 'PLANT FOR BETTER COAL PREPARATION' is printed in a bold, sans-serif font at the bottom left. Below it, the text 'Send now for these fully illustrated brochures to' is followed by 'THE BIRTLEY COMPANY LIMITED' in a large, bold, sans-serif font. At the very bottom, the address 'MARKET PLACE CHAMBERS, WEST BARS, CHESTERFIELD' and the telephone number 'Tel. CHESTERFIELD 4116 (2 lines)' are provided.

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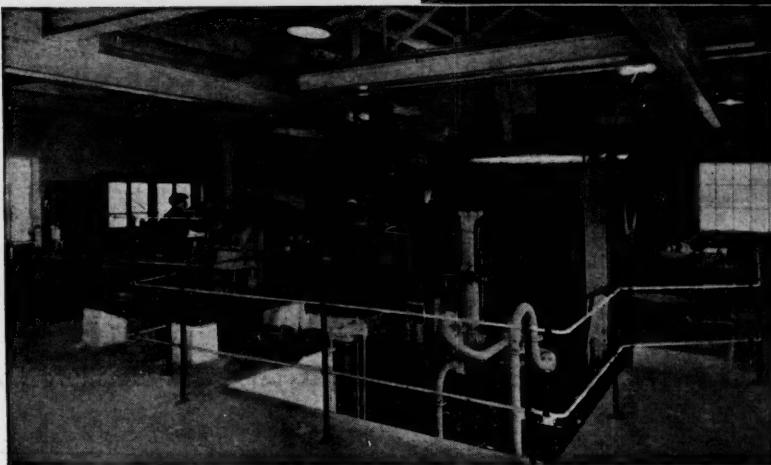
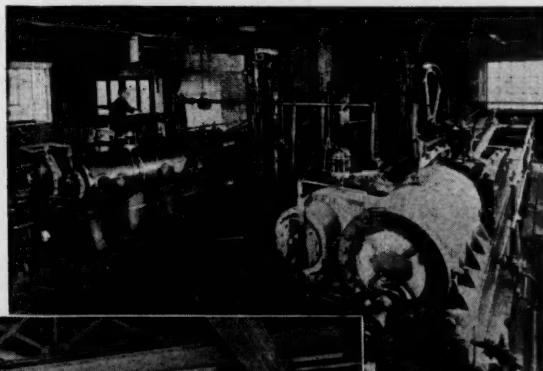
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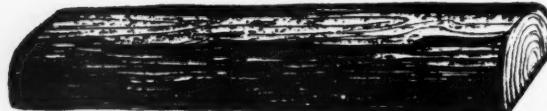
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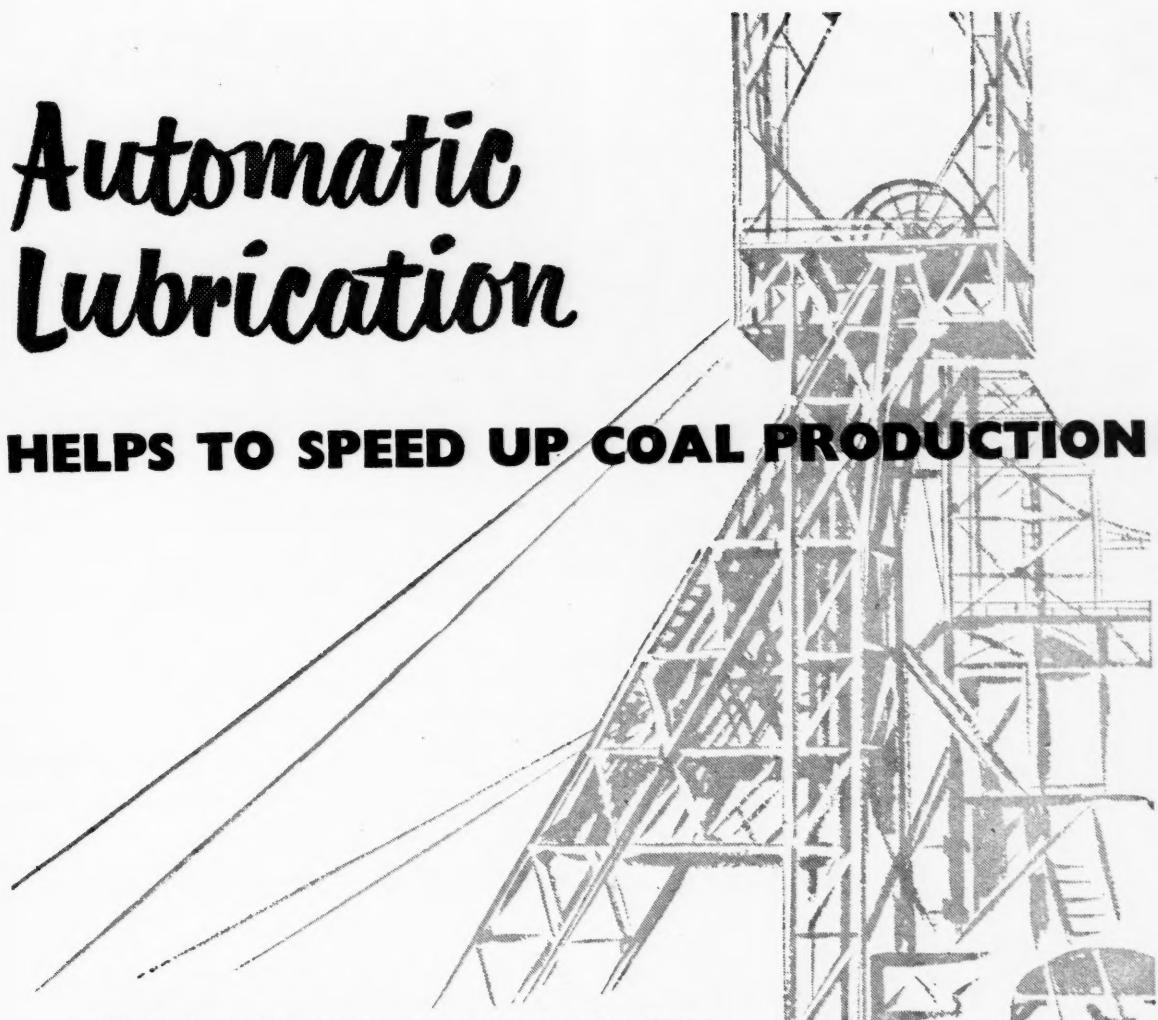
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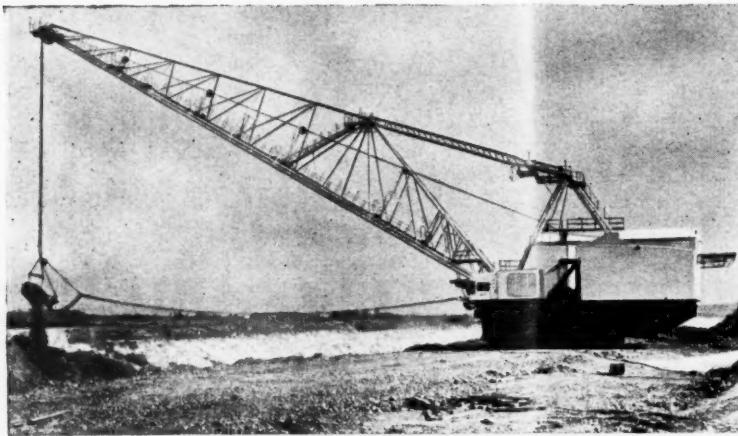
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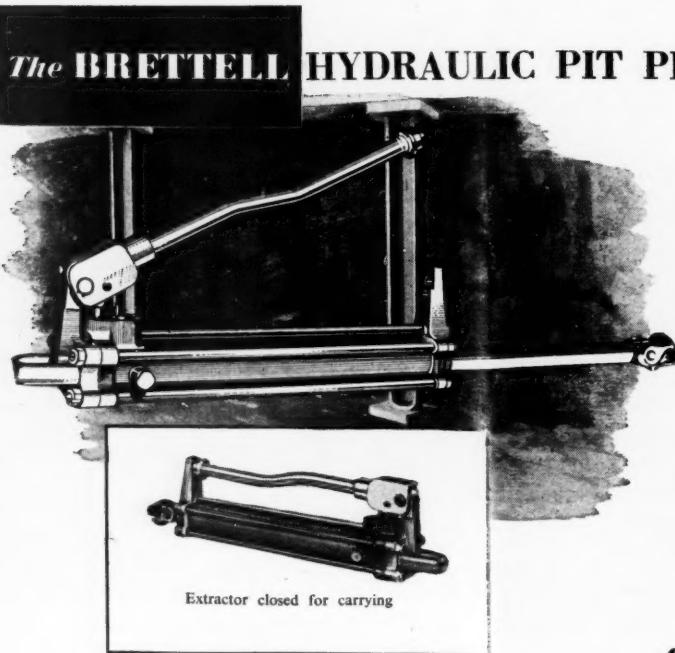
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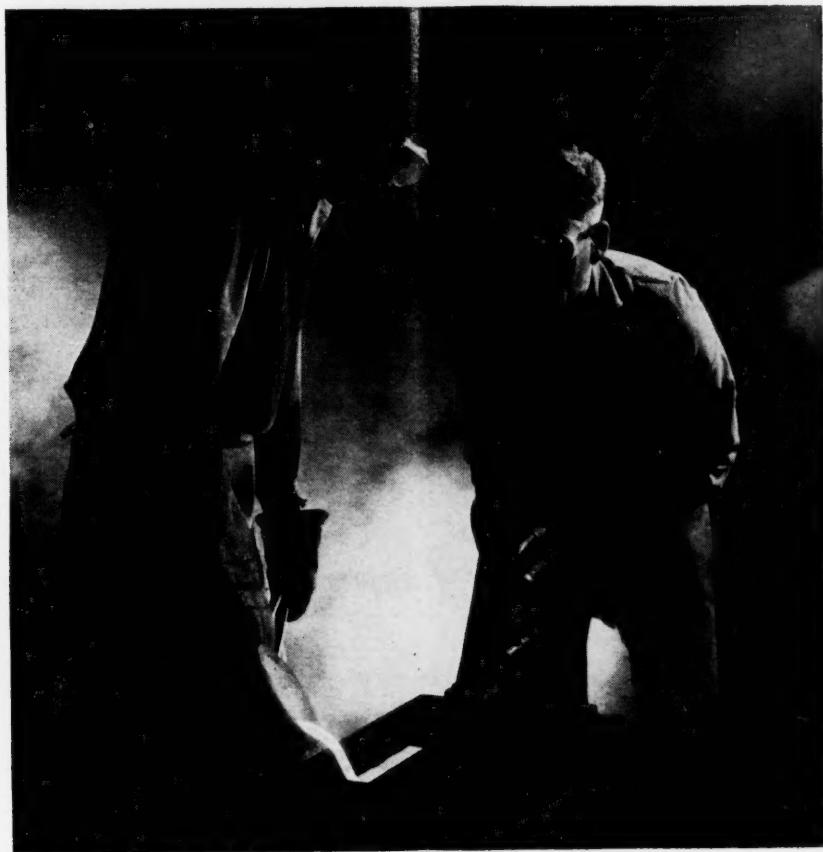
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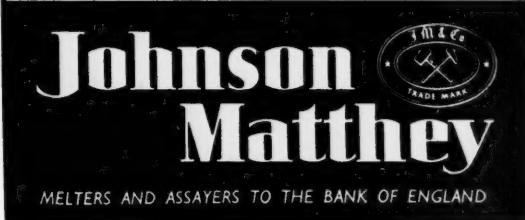
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The Mining Journal

Established 1835

Vol. CCXLI No. 6175

LONDON, DECEMBER 25, 1953

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NOTES AND COMMENTS

BOMA on Overseas Mining Taxation

The depressing thing about Mr. Robert Walker's able presidential speech at last Friday's meeting of the British Overseas Mining Association was that it should still be necessary in the year 1953 for him to be making substantially the same appeal to the commonsense of the British Government of the day his predecessors in office have been making for so long. Having regard to the vital importance, now and for the future, of our overseas trade in whatever form it may take, the time has, or at any rate should have, long since gone when the apparent difficulties of granting discriminatory tax reliefs in favour of one particular industry should be regarded as justification for doing nothing. Moreover, having regard to the special nature of the tax problems confronting the mining industry, it should not be beyond the ingenuity of a Government (which can successfully remove the entertainment tax on cricket, while retaining it on football) to work out mining taxation reliefs which will not embarrass their dealings with other industries.

Indeed, some of the reliefs of which the British overseas mining industry stands most in need would scarcely arise at all in connection with the majority of British industries. Typical of these are reliefs permitting the writing off of initial capital expenditure out of earnings before paying tax or giving depreciation allowances based on the recognition that mineral wealth is not regenerative and that a mine is constantly a wasting asset. Other countries with flourishing mining industries have long since recognized that the high risk factor inseparable from mining makes relief of this nature essential if sufficient capital is to be attracted into what is economically an essential basic industry and financially a dollar earning industry of increasing importance as United States' dependence on imported metals and ores grows, as it inevitably must in the decades ahead.

Mr. Walker did, however, emphasize in the course of his

speech another aspect of U.K. fiscal policy, namely the high rate of U.K. dividend tax which in itself, in any event (and more particularly in the absence of any other form of relief), is proving a serious obstacle to the financing from London of new overseas mining enterprises. It is, moreover, an obstacle for which company migration, where this can still be achieved, provides no solution, as in this instance

it is the British investor, rather than the company, who is receiving the disincentive. Before the introduction of double taxation reliefs the position was, of course, quite absurd, but even now this relief only operates in respect of taxes directly imposed on dividends and if the Governments of the territories concerned elect to tax their

mining industries on some other basis (such as by royalty or export duty) the British investor receives no compensatory relief. More than that, for such indirect charges as, for example, the new Minerals Duty operative in the Gold Coast, which is not susceptible of double taxation relief, increases directly in proportion to the efficiency of the mining operations or the richness of the deposit discovered. Mr. A. Chester Beatty, Jnr., in making this latter point in his address to shareholders of Consolidated African Selection Trust (see page 760) clearly illustrates the unreasonableness of such a tax system and warns that a levy on efficiency is a strong deterrent to those considering investment in overseas territories where capital and technical skill are required to develop natural resources.

In these circumstances it is natural enough that Governments, more particularly those within the Commonwealth whose mining industries depend largely on London finance, should be reluctant to provide incentives by way of taxation reliefs for new mining ventures, if they feel that much of the effect of this incentive is going to be lost, so far as the British investor is concerned, in the pocket of the Treasury. Already this reluctance is finding practical expression in discriminatory fiscal legislation designed specifically to exclude British capital from the benefits of local taxation

The Mining Journal
wishes all its readers a Happy Christmas
and a Prosperous New Year

relief. Two cases cited by Mr. Walker in this connection are ominous for the future. Thus, reliefs on uranium profits in Australia are limited to those companies controlled at least as to 75 per cent by individual shareholders resident in that country. Again we find Southern Rhodesia granting percentage depletion allowances to United States and Canadian registered companies operating in the Dominion while no such relief is granted to U.K. registered companies. Discrimination of this sort, coupled with local political pressures to bring about the migration of U.K. registered mining companies, must steadily grow worse in the present situation.

But even aside from this the British overseas mining industry under existing fiscal policy seems destined for eventual, albeit gradual, extinction, for, as Mr. Walker reminded his audience, no single new overseas mining company has been registered in this country since 1939. Moreover, as if this were not enough, he went on to point out that in the post-war years 1946-52 out of a total of £260,000,000 raised for overseas mining in the London capital market, only £15,000,000 has been found for U.K. controlled companies—and even of this pathetic figure, more than a quarter has been raised by companies which have since migrated.

Presumably the glimmer of hope which must sustain those, who still look forward to seeing London regain its pre-eminence as a world-wide mining centre, must lie in the recommendations in the final report of the Royal Commission on Taxation. What these will prove to be time alone will show, but the logic of Boma's case is too sound for us not to feel some optimism as to what the report may contain, even if we have less confidence regarding the reception which it may receive in Whitehall.

Community or Cartel

The High Authority of the European Coal and Steel Community has run into heavy weather. With the declaration of a free market in steel seven months ago, all tariffs and quota restrictions between the six member States have been abolished, but the hopes that this liberation of the steel trade from restrictive practices would lead to expansion have thus far failed to materialize.

Price discriminations seem to be the core of the problem. In the guise of rebates to forward customers, many Continental steel producers have been quoting preferential rates which violate the principles of strict equality enunciated by the High Authority, and attempts to bring them into line have thus far lead only to denunciation of the High Authority as "a supra national police force."

The dispute is still unresolved. Violations of the fair price policy have become so flagrant that the High Authority has given a broad hint that the recently formed Steel Export Cartel would be compulsorily disbanded. But threatened men live long. The Cartel continues to function. Only last week a series of reductions in export prices—valid only for 30 days—was announced, and the response of the advisory committee of the Schuman plan nations has been the submission of proposals to amend the whole technique of steel price quotations which are intended to re-establish the authority of the Community, and at the same time permit of small deviations from the price schedules.

Against this background, the delay in the presentation of M. Monnet's formal proposals for the closer association of the British steel industry with that of the Community is not surprising. Of more immediate interest is the effect of these internal conflicts upon the prospects of a loan from America. Realization of the Community's production targets of 285,000,000 tons of coal and 50,000,000 tons of steel by the end of 1957 is largely dependent upon the in-

vestment of American capital, which is unlikely to be forthcoming until the High Authority is able to evolve and enforce a common financial and economic authority.

Rehabilitation of the Bengkalis Gold Mines

The Bengkalis gold mines of Indonesia, which produced 362 kg. in 1940 and 354.6 kg. in 1941, are anticipated to be in full production at approximately the pre-war output by June or July, 1954. In the middle of 1953 the company established before the war, N.V. Exploratie Mij Bengkalis, was authorized by the Government to resume mining operations.

Although it was stressed that full re-habilitation could not be achieved without the assistance of the Indonesian Government, this assistance more emphatically concerned financial aid, namely the restoration of the gold taken by the Japanese and the gold in the possession of the Java Bank, now the Bank of Indonesia.

As a result of this suggestion it was announced by the Foreign Exchange Board on May 17 last year that 90 kg. of fine gold would be restored to the company for sale on the free market in Djakarta. In addition, the company was granted full rights over 75 per cent of the gold produced for three years, with the remaining 25 per cent of production surrendered to the Foreign Exchange Board in return for foreign exchange. The Government is also being of considerable assistance in the restoration of the mines, particularly in the transportation of the necessary machinery and equipment to the area.

Western United States

(From Our Own Correspondent)

Portland, Oregon, November 30.

The Attorney General of Alaska has submitted an opinion that citizens of Canada have the same rights to locate mining claims in Alaska as citizens of that territory. The opinion is based on an agreement of long standing between British Columbia and Alaska and statutes by the two but it is difficult to reconcile it with the U.S. Mining Laws which provide specifically that locations may be made by "citizens of the United States and those who have declared their intentions."

Present indications are that Alaska may become an important source of tin in the not distant future. Deposits, both stream and lode, have been known for years but are in an almost inaccessible locality and have not been systematically explored until recently. There has been some production on a small scale with the highest annual output approximating 100 tons of tin in concentrates. The location is at the tip of the Seward Peninsula at the narrowest part of the Behring Strait. The ore occurs at or adjacent to a contact of granite and limestone and the gravels are found in the streams of the tributary watershed.

U.S. Tin Corporation, operating a lode mine in this area, has been shipping concentrates, and is now enlarging its mill to treat 50 tons daily. Zenda Gold Mining Co. plans the largest operation but so far has confined its activities to drilling the alluvial deposits with results that have been very encouraging. These indicate, with only a minor portion of the ground drilled, in excess of 3,500,000 pounds of tin with an average of four pounds per cu. yd. The drilling programme is not completed but sufficient tin is demonstrated that the company is planning for substantial production to commence during 1954.

As the Markets are closed over the Christmas holiday, our two regular features—Metals, Minerals and Alloys, and Mining Markets—are not appearing this week. They will be resumed in our next issue.

Namaqualand's Mineral Wealth

The rapid development of Namaqualand as a mineral producer must in some measure be viewed in conjunction with the industrial progress of the neighbouring district of South-West Africa, for the transportation facilities of the latter territory are playing an important part in the growth of Namaqualand's mineral output. The following article presents a comprehensive picture of the mineral deposits now being exploited in Namaqualand, and in so doing strikes a note of optimism for the future of the mineral industry in the territory.

Namaqualand is rapidly developing into a very large producer of minerals. Its resources include diamonds, copper, tungsten, beryl, monazite, sillimanite and bismuth. Last year (1952) a rich strike of monazite was made near Van Rynsdorp and six men were reported to have made £250,000 by selling 75 per cent of the mining rights. A few months ago a Cape Town prospector, Mr. A. H. Smit, reported an occurrence which he described as one of the richest strikes of base minerals ever made in Africa. Apart from new potentialities which are indicated by recent discoveries, the high prices of tungsten and copper have brought prosperity to Namaqualand and important mining developments are taking place.

The territory known as Namaqualand extends along the west coast of Africa for over 600 miles from Damaraland in the north to 31 deg. south, stretching inland for 80 to 350 miles. The Orange River divides it into two sections, situated respectively within the Union of South Africa and in the Mandated Territory of South-West Africa. The inhabitants of this arid region are the purest surviving type of Hottentot.

In reviewing the progress of mining in Namaqualand, some attention must also be accorded to developments in neighbouring areas of South-West Africa, which form part of the general background. For example, a £400,000 storage and loading installation at Walvis Bay now approaching completion, though intended primarily for South-West African mines, will also assist Namaqualand. It resulted from an arrangement between the Tsumeb Corporation and the South African Railways, and provides for the storage under cover of 30,000 tons of ores and concentrates, the capacity of the mechanical equipment being 300 tons a day. This plant will enable some Namaqualand producers south of the Orange River to ship their ores through Walvis Bay, where the facilities are less congested than at Cape Town.

VALUE OF GEOLOGICAL MAPPING

In 1934, Dr. T. W. Gevers made a detailed geological map of the area reported to be rich in minerals, and three years later a detailed geological report was published.¹ Gevers and his colleagues, it is interesting to recall, were not very optimistic about the economic outlook for Namaqualand minerals, though they concluded that there was a wealth of pegmatites along the northern margin of the great granite-gneiss massif of Namaqualand. The oldest rocks of the area, they reported, were highly altered quartzites and associated schistose sediments. These rocks have been invaded by a suite of ancient intrusives ranging from ultra-basic through intermediate normal biotite granites. Micro-crystalline varieties of the latter rock types are well represented. These rocks were in turn invaded by a group of acid intrusives, representing off-shoots and marginal facies of the great granite-gneiss massif, which is apparently the parent body of the pegmatites.

Beryl, though of common occurrence, was found to be more or less sparsely scattered through the pegmatites, as were small quantities of widely scattered deposits of bismuth. The metal occurs in the native state, and as the oxide, hydrated carbonate, oxycarbonate and oxychloride. Felspar occurs in sufficient quantity.

Good quality mica of various grades is abundantly scattered through the mineralized pegmatites in nests and pockets often several yards wide. The bulk is of less than 1 in. diameter, but material 6 in. and over is quite abundant. In such a remote area, however, the mining of mica on its own account seemed unlikely to be an economic proposition.

Lithium is widely distributed in the form of spodumene, lepidolite, and other minerals. Spodumene is present in appreciable quantities in a number of localities, logs several feet long and about a foot wide being quite common. The mining of spodumene on its own account, however, was not considered to be economically feasible.

In general, the opinions expressed by Gevers and his colleagues have proved correct, but new factors have been introduced by the high prices now obtained for many minerals, the industrialization of the Union, improved transport communications, and the advent of entirely new demands.

DIAMONDS A MAJOR PRODUCT

Diamonds and copper are still responsible for the bulk of the mineral output. On the South African side of the Orange River alluvial diamonds occur along the coast of Namaqualand from the mouth of the river south-west to beyond the Zout River for a distance of over 200 miles. The diamonds are found in marine gravels occupying wave-cut terraces, the deposits being for the most part buried by sand, surface limestone, and later gravels. The most important deposit is situated less than a mile from the Orange River at Alexander Bay. This now constitutes the State alluvial diggings and has proved to be very rich in diamonds of high quality. Some 400 white men are employed on these diggings. Rich terraces have also been worked at Kleinze at the mouth of the Buffels River. Diggings 45 miles south of this town are worked by a subsidiary company to de Beers, which employs about 100 men.

In 1925 the discovery of diamonds in the marine terraces of Alexander Bay directed the attention of prospectors to similar raised terraces at Oranjemund, north of the river, which also proved to be diamondiferous. Further exploration established the occurrence of alluvial diamonds, though not continuously, along the coast of South-West Africa for a distance of over 300 miles. The Oppenheimer Bridge, constructed in 1951, links the South-West African diamond fields with Port Nolloth. The origin of the diamonds along the Atlantic coast has not been conclusively established.

The first ore ever to be worked by white men in South Africa was produced at O'Kiep, where mining is believed to have started in 1852. This deposit was mined for many years by the old and famous Cape Copper Co., which suspended operations in 1930. Its assets were acquired in 1937 by the O'Kiep Copper Co. A modern plant was erected and after three years' preliminary work, smelting operations were restarted in 1940. Considerable expansion has since taken place. In the year ended June 30, 1952, 972,200 s.tons were milled containing 2.39 per cent copper, the corresponding figures for 1943 being 594,963 s.tons and 2.59 per cent. The smelter output for 1952 was the highest in the company's history: it amounted to 23,622 tons of blister copper averaging 99.127 per cent copper, 0.102 oz.

of gold, and 2.84 oz. of silver. The average cost of production was £76 14s. per ton blister compared with £61 18s. 3d. for 1951. This increase reflected the increase in labour and supplies as well as the policy of mining lower grade ores in the Nababeep and O'Kiep mines.

The Nababeep mine, which has been the mainstay of operations since production was restarted, is now in its final stages, and should be mined out by 1957, when a recently discovered orebody in the Nababeep West section will have been opened up. With this orebody only partially developed sulphide ore reserves at the end of the fiscal year totalled 17,410,000 tons. Authorized capital expenditures subsequent to June 30, 1952, amount to £1,104,174. The East O'Kiep mill is being expanded from 35,000 tons to 50,000 tons per month, and the Nababeep West orebody is being equipped for a contemplated production of 1,800 to 2,000 tons per day. Other projects sanctioned include water-borne sewerage systems and modern sewage disposal plants for the villages of Nababeep and O'Kiep, together with additional housing and recreation facilities for employees.

In 1952 the Union of South Africa produced 271 s.tons of tungsten, compared with 193 s.tons in 1951. South-West Africa produced 9 tons of scheelite and 111 tons of wolframite in 1952, the corresponding figures for 1951 being 12 tons and 20 tons. The small production in the Union is largely in the hands of diggers and prospectors of uncertain address, whose output is usually handled by a limited number of agents. The export of tungsten is subject to the issue of an export licence by the Controller of Non-Ferrous Metals.

Before the war Namaqualand's tungsten output consisted mainly of scheelite ore from the Steinkopf reserve and from private holdings near Goodhouse, together with wolframite from the Kenhardt and Gordonia districts. In 1941 the field of search was extended eastwards and southwards. New finds were developed at Rhonosterkop and at Dyasonskslip, near Upington. Towards the south, several new deposits were opened up within the copper field around O'Kiep. Subsequent geological research proved the existence of tungsten ores between these widely separated points, but the extensiveness of the field of known occurrence and its remoteness hindered capital investment for many years.

EXPANDING OPERATIONS

Among the large companies to become interested in tungsten were the O'Kiep Copper Company Ltd., whose operations were shut down in November, 1949, when the London price slumped to 80s. per ton. This company is again interested in the production of tungsten concentrates and expected to bring a 200 ton per day concentrating plant into production during 1953. This plant will treat wolframite ore averaging between 0.45 and 0.50 per cent Wo₃, which will be derived chiefly from the Nababeep section, the reserves being estimated at 175,000 tons of ore. A contract has been signed with an agency of the United States Government for the purchase of these concentrates at a fixed price until March 31, 1958. O'Kiep in turn has agreed to spend £180,000 to equip and develop this operation for mining and milling.

Namaqualand continues to produce substantial tonnages of beryl, which is mined on both sides of the border, but outputs have recently declined. The South African records show only 413 tons for 1952, compared with 653 tons in 1951 and 930 tons in 1950. The corresponding figures for South-West Africa are 592 tons, 830 tons, and 726 tons. Prospectors are still searching for beryl, but production seems to be largely confined to nomad diggers, who are probably backed by the two main exporters. An export permit is required for beryl ore.

Other minerals for which prospectors in Namaqualand are searching include tantalite-columbite. In 1952 the

Union had an output of 4 s.tons, the sole producer being P. Weidner, of Warmbad, S.W.A. Tantalite-columbite is also produced in South-West Africa by P. Weidner and by M. H. C. Brockman and columbite by Consolidated Tin Mines Ltd., of Omaruru. The total output for South-West Africa in 1952 was 4,400 lb.

Tantalite-columbite ore bodies in the Kalahari are to be worked by the Uis Tin Mining Co. (S.W.A.) Ltd. In 1952 it was announced that Associated Tin Mines (S.W.A.) Ltd. had converted a loan of £100,000 to the Uis Company into shares and had also undertaken to advance an additional £100,000 to enable new plant of the Uis Mine to be brought into operation. Associated Tin had an option to convert the second loan into Uis shares at 7s. 6d. each. They have undertaken to procure the sale by Namib Tin Mines Ltd. to the Uis Company of 57 base metal claims for £50,000. This amount will be converted by the Namib Company into Uis shares.

In these transactions the directors of the Uis Company were influenced by the overriding desirability of acquiring from Namib Tin Mines (a wholly owned subsidiary of Associated Tin Mines (S.W.A.) Ltd.) the whole of its claim area surrounding the Oestland claims which belong to Uis. These contain the tantalite-columbite ore bodies, while the claims owned by Namib Tin Mines Ltd. contain the extensions to these bodies, as well as lithium ore bodies and also very large tin-bearing pegmatite ore bodies.

CORUNDUM-SILLIMANITE OCCURRENCES

One of the most important developments in Namaqualand since the war was the discovery by P. Weidner of corundum-sillimanite occurrences at Pella. Production was started in February, 1951, when trial shipments were made. The most important of these deposits is at Swartkoppies, where a conservative estimate indicates 400,000 tons of intergrown corundum-sillimanite ore. Two miles away is a deposit of similar ore estimated at 100,000 tons. Pure sillimanite ore, occurring in replacement veins up to several feet wide, forms a small proportion of the tonnage.

Mining operations are facilitated by the well developed joint systems at Swartkoppies and also by the homogeneous nature of the ore and the total absence of any contaminating country rock. The potential unexposed ore reserves are believed to be large. The nearest railhead is at Kakamas, 150 miles away, the cost of transport to railhead being about 45s. per ton. No statistics of sillimanite production are available, but in 1952 the Union produced 21,477 tons of andalusite-sillimanite, compared with 12,663 tons in 1951. A large proportion of these outputs consisted of Namaqualand sillimanite.

In *Optima* (September, 1952) a quarterly review published by the Anglo American Corporation of South Africa, it was reported that the Corporation was taking a 75 per cent interest in the monazite deposit found in the van Rynsdorp district of Namaqualand, to which reference was previously made. The capital needed to mine the deposit was estimated at between £250,000 and £300,000. All production for the period ending March 31, 1956, has been sold forward, mainly to the United States. Annual production is estimated at 8,000 tons of concentrate, containing 55 per cent rare earths and thorium oxide. The right to mine and concentrate the ore and to export the products has been granted by the Minister of Mines on the recommendation of the Atomic Energy Board on the basis of an agreed royalty. No further particulars of this undertaking have been released for publication.

REFERENCES

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The Sirigao Iron Ore Mine, Goa

The first mechanized iron ore mine in Portuguese India was inaugurated at Sirigao by General Paulo Benard Guedes, the Governor-General, on October 31, 1953. The property is operated by the Chowgule Company, and representatives of Japanese mining, steel and commercial interests were present at the ceremony. Indeed, the Sirigao mechanization scheme is the outcome of a contract signed in Tokyo on October 8, 1951, between the Kokan Mining Company Ltd. of Japan and the Chowgule Company. The following article gives an overall picture of the mechanization scheme, referring particularly to the various transportation units employed.

The Sirigao iron ore mine is 25 miles from Mormugao harbour and spreads over an approximate area of one square mile. It can be approached from land or sea, and the property promises to develop into an important industrial town.

The complete mining equipment for the property has been imported from Japan through Kokan Mining Company Ltd., while the heavy excavators, dumpers and drilling machines have been imported from Britain and the United States. With the erection of belt conveyors, the mine is now one of the most modern, efficient and economically operated in Asia.

Transport of ore from Sirigao to Mormugao harbour is carried out by a fleet of 19 barges with a total carrying capacity of 2,600 tons. The transportation strength will be increased by the end of the year, however, when its total capacity will be 6,500 tons.

A capital outlay of a crore and a half rupees was involved in the complete mechanization of the mines. Part of the investment, amounting to Rs.75 lakhs, is a loan advanced by the Export and Import Bank of Japan through the Kokan Mining Company Ltd., which also supplied technical assistance. Originally there were 52 Japanese technicians attached to the company, but their number has been gradually reduced. When the company reaches its maximum production of 2,000 tons a day the services of only six Japanese will be retained, the remainder being replaced by Indians.

WORKING METHODS

The deposits have been assayed and found to be satisfactory. The rock strata of ferruginous quartzite in the Precambrian Dharwar series have been secondarily enriched. The mineral stratum is plate-shaped in formation but, owing to the extraction of the silica acid ingredient, presents a porous appearance.

The mines are open cut and are operated on the bench system. The mine is explored by means of heavy blasting, accomplished through churn drills and wagon jacks for vertical and horizontal drilling of holes of different sizes. In this way an output of 20,000 tons of iron ore is expected per each blast. The ore thus collected is further blasted to render it suitable for loading operations.

The blasted ore is removed to the crushing plant by means of dumpers, which are loaded by electrical and diesel shovels. There are two large electrical shovels of 2 cu. yd. capacity, and two of 2½ cu. yd. capacity American shovels worked by diesel engine. Besides these, grab cranes and small shovels are operated on diesel.

The ore is conveyed from the mine faces to the crushing plant, a distance of 1,000 metres, by means of heavy 15 ton capacity Euclid dumpers and 6 ton capacity Isuzu trucks. Bulldozers of 10 ton capacity are used for collecting the ore on the mine faces.

The ore is transferred to the crushing plant from where it is dumped into the ore bin over belt conveyors. Here it is dressed and again loaded automatically into the barges which transport it to Marmagao for export.

Extensive dredging and excavation near the ore bin ensures that sufficient depth is maintained to enable barges to float freely near the bin. Approximately 2,400 cu. metres

of earth have been lifted off the waterside. The excavation of the quay foundation was started on March 1, 1952, the total area comprising approximately 1,700 cu. metres.

Manufactured in Japan, and supplied under the loan agreement, the belt conveyor is 100 metres long and carries 360 tons of ore per hour from the crushing plant to the rejection bin. Measuring 27 metres in length, 8 metres in width and 11.8 metres in height, the rejection bin has three compartments, one for receiving the screened dust and the other two for collecting the rejected ore.

Erected on the quay foundation, the ore bin has actually three bins each with a storing capacity of 2,000 tons of ore when heaped. The bin is 95 metres in length and 8 metres in width and is 11.8 metres in height. The total concreting is 2,056 cu. metres. Each of the bins is fitted with ten chutes operated by air winch, and each bin has a loading capacity of 3,000 tons per hour. They have conveyor and trippers 32 metres long. The ore is conveyed by the belt conveyor over the ore bin by means of trippers. From here the ore is loaded into the barges through the chutes operated by compressors. Three barges can be simultaneously loaded. The ore is then shipped to Marmagao, 25 miles to the south.

The crushing plant, which stands to a height of 10.24 metres from the ground level, involves a total R.C.C. construction of 466 cu. metres. Other major construction works include the power house, compressor house, pump house and slipway. The slipway is a steel structure of 220 tons, 54 metres long, 14.756 metres wide, and 10.32 metres high.

The main power house is equipped with two diesel sets, each of 500 kW., 730 h.p., 350 r.p.m., generating A.C. current of 3,000 Volts. This power house supplies energy to most of the machinery, excepting a few important diesel excavators. The compressor house driven on electric motors is equipped with two compressors of 500 cu. ft. per min. capacity compressed air, which is carried to all the mine faces.

MINE OPERATIONS

The mechanization of the mines, *in toto*, consists of the following operations: Heavy blasting is carried out at the mine faces, with drilling accomplished by churn drills on the vertical and by heavy wagon drills on the horizontal planes. The blasted areas are then excavated by diesel or electric shovels of 2 to 2½ cu. yd. capacity, and loaded into the heavy Euclid dumpers which transport this ore and dump it straight into the crusher.

This crusher has a delivery capacity of 400 tons of crushed ore per hour, and from here the crushed ore passes to the belt conveyor. These belt conveyors carry the ore to the trommels, where the dust and smalls below 2 cm. are rejected and the rest passes on to the picking belts, where the laterite portion is picked up by a batch of labourers. The ore so dressed is conveyed again by the belt conveyor to the ore bin, which is provided with 30 chutes, operated by air winches, which can deliver a total quantity of 900 tons per hour, or, namely, a ship load during a period of ten hours.

The total cost of the equipment, including the cost of construction, has amounted to approximately \$3,000,000.

Productivity in European Foundries

The first European Seminar on Foundry Productivity was held in Paris last year under the auspices of the Organization for European Economic Co-operation. The report on the papers given and discussions held at this seminar has recently been published, and the following article deals with some of the main points which emerged.

The Organization for European Economic Co-operation comprises some 18 member countries and came into being on April 16, 1948, its aim being to strengthen the bonds, both intellectual and economic, which exist between its members and "to make the fullest collective use of their individual capacities and potentialities." It was towards this end that foundry experts from 12 member countries met to discuss their problems and record the contribution which each was making towards fuller productivity.

PRODUCTIVITY IN THE U.K.

As a result of the visit of the Steel Foundry Productivity Team to the United States, and the subsequent dissemination of the lessons learnt, an overall increase of productivity of the order of 15-20 per cent has been achieved, despite the restraining effect of the lack of steel scrap. A research and development division was set up by the B.S.F.A. in 1950. This division is already carrying out research work on factors which directly concern productivity, such as experimental work with the Linde flux injection burner, the use of which would ease the bottleneck in fettling.

Generally speaking, since 1949 attention has been focussed on the moulding shop and the pattern shop, the reason for this being that the output per man hour depends on the moulder, whilst the increase in mechanization tends to transfer skill from moulder to pattern maker. The increase in mechanization has also resulted in many firms transferring, as far as possible, complication from the mould to the core. Much has also been done to improve service to the key-worker in the completely mechanized shop by the installation of mechanized moulding and sand plant and in non-mechanized shops by the installation of sand slingers and the aid of labourers. Since 1949, many firms have increased mechanization and have also progressed towards a more orderly flow line of work. Careful attention has been given to handling equipment and there has been increasing usage of core-blowing machines.

It would appear that most of the machinery and equipment seen by the productivity team in the United States was known and is in use in Britain. Increased productivity comes as a result of the more intelligent use of labour-saving devices and the willing co-operation of the operatives towards this end.

OTHER COUNTRIES OF EUROPE

The main incentive to an increase in productivity in Belgium would appear to be a reasonably steady and unvarying market. Although plants are, on the whole, less well equipped than those in America nevertheless there are a large number of highly mechanized units. It is, in general, the smaller foundries which are rather unprogressive. The methods for increasing productivity which have been most favourably received are those which are flexible and which leave room for alteration in the manufacturing process. Examples of these are the use of self-contained handling devices such as mobile power shovels, the automatic charging of cupola furnaces, and the like.

The position in the Netherlands would appear to be somewhat similar and it is evident that a higher degree of specialization is necessary here. The well-equipped foundries each have their own laboratories but the smaller foundries have no proper check on their processes.

In Italy, foundries are numerous but the market is

limited and mass production is unusual. There is no national organization to carry out research work although some such work is done by the main iron and steel companies and a technical assistance service is provided by the Iron Foundries Association. There is much to be done in the way of standardization, improvement of factory layouts and improvement of human relations. On the other hand, almost all the larger foundries have installed modern sand preparation and handling plant, modern moulding machines, roller conveyors and mechanical shakeouts. Between 1949 and 1951 productivity was increased by about 30 per cent.

FRENCH PRODUCTIVITY EXPERIMENT

The French productivity experiment concerned itself primarily with the attitude of the worker. It aimed, in the first instance, to mould the staff into a homogenous unit with the intention of breaking down the workers' resistance to change and the creation of a real interest in the working of the firm. In order to indoctrinate the workers, groups of so-called "animateurs," enjoying the confidence of workers and management alike, were trained in new methods of working and, in addition, were also trained to express themselves in a lucid and convincing manner. They were then sent back to their respective works where they fulfilled, in a sense, the function of a production engineer. They did not provide ready made solutions but rather encouraged the workers in the solution of their own problems.

Foundry is one of the oldest industries and, as a consequence, premises are frequently old and equipment cumbersome. Re-equipment is an expensive item and cannot be carried out without careful consideration. Re-organization, without a great deal of capital expenditure on new equipment can, however, produce a striking increase in productivity. First and foremost it is necessary to carry out time and motion studies to ascertain where time is being wasted and what constitutes the retarding factors. Next, all abnormal or useless operations must be eliminated and plans made for re-designing the whole process.

An interesting example of what can be done in this way is afforded by the introduction in a French foundry of lasso cable overhead handling equipment. This comparatively cheap innovation, together with the necessary re-organization, resulted in the reduction of the number of handling operations from 21 to 12 with a corresponding increase in productivity.

TECHNICAL ADVISORY SERVICES

The setting up of technical advisory services constitutes an important factor in the improvement of productivity. Such advisory organizations give their services gratis, funds being provided by foundry owners' contributions, supplemented, in some countries, by government subsidy. In Britain, for example, the iron foundry branch of industry has its own research association financed by contributions from industry to which is added a government subsidy. The government takes no part in the running of the service. In France, on the other hand, collection of contributions is enforced by statute and the government, although having no right to interfere with the administration of the centre, retains certain supervisory powers, particularly with regard to the administration of the funds. On the whole there seems little doubt that many European foundries have done much to rationalize their production.

Developments at INCO

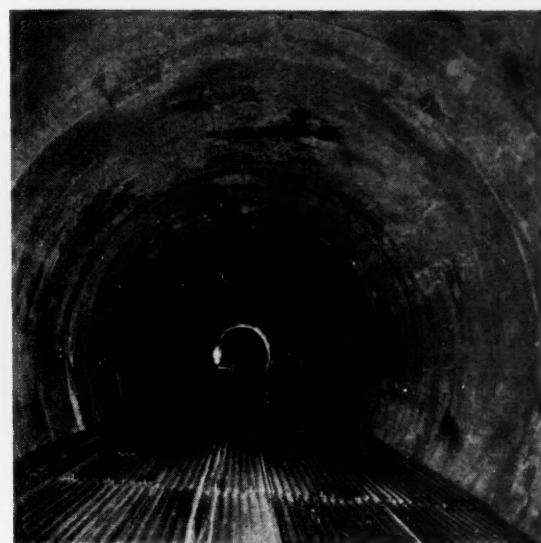
Two large-scale developments are taking place at mines of the International Nickel Company of Canada Ltd., in the Sudbury district of Ontario. At the Creighton Mine a 13 ft. dia. air shaft is being driven 600 ft. through rock country, and at the Frood-Stobie property the company is installing Canada's highest powered mine hoist.

An underground airway is being driven at the Creighton Mine. The airway is more than 13 ft. in dia. and is lined with concrete.

Designed to serve the Creighton from 58 to 64 levels with 350,000 cu. ft. of air per min., the new airway involves driving through 600 ft. It fits into the mine's elaborate ventilation system, of which the main intake fan is located on 40 level and the main exhaust fan on 30 level. A portion of the airway is being partitioned off with corrugated iron sheeting to serve as a continuation of the mine's safety manway to surface, and also to carry the sand fill pipeline.

An innovation is the special construction method by which the airshaft is being installed. A pilot raise, 7 by 11 ft., is first driven upwards in 200 ft. sections by regular mining technique. Then, working from the top down, each section of the pilot raise is widened to the dimensions of the circular airway, 13 ft. 6 in. in dia., and is concreted. Widening and concreting operations are carried on from a platform suspended on four sets of chains from eye bolts driven into a finished lift of the airway wall. A connection is made to the concrete pour pipe which has been carried down in the manway compartment as construction of the airway progressed, and concrete is poured by gravity flow from the mixing station located up on 56 level. While the 10 ft. lift is setting, another round is drilled off.

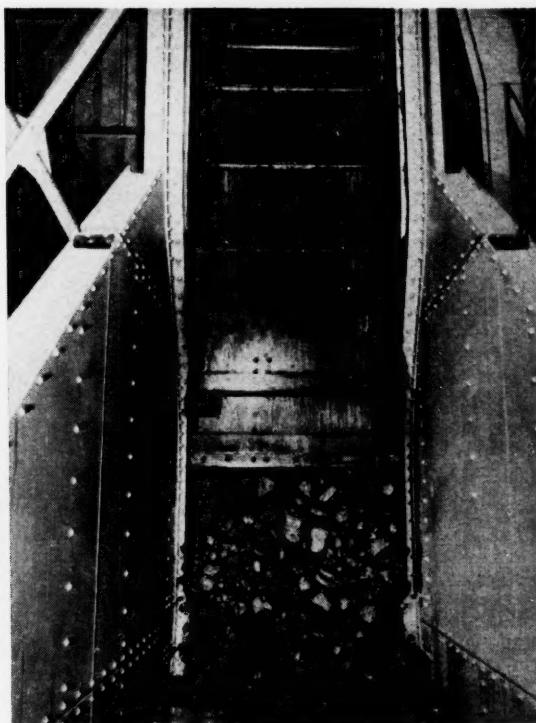
The efficiency of the construction cycle owes much to the sectional steel forms, which can be lowered into position for each pour in a fraction of the time it would take to set up wooden forms, and of course can be used over and over again. Another important factor is the push-button service on concrete. At each level of the mine a concreted station is being established in which ventilation system controls for the airway will be located.



A 200 ft. section of the underground airway at Creighton mine, with eyebolts visible in roof

The second development, stated to be Canada's highest powered mine hoist, driven by a 6,000 h.p. dual-motor, has been put into operation at one of the new shafts at Frood-Stobie Mine. Controlled by push-button from an underground operating station, the hoist will lift skips, each containing 15 tons of nickel-copper ore, at an average rate of 14,000 tons daily.

Installed in conjunction with the new hoist are bottom-dump skips. In these skips, being used by International Nickel for the first time, the bottom of the bucket or box is a hinged door which is opened when the skip reaches its dumping position in the headframe of the mine, allowing the ore to drop out. With the Kimberley type skip, which has been standard in Inco operations up to now, the box must be tipped to dump the ore. The bottom-dump skips provide an increase in hoisting capacity by reducing the distance of slow travel required in the headframe, thus decreasing the time of the hoisting cycle.



Nickel-copper ore being dumped from a bottom dump skip at Frood-Stobie mine

The Stalingrad Hydro-Electric Station

During the last three years a hydro-electric station, claimed to be one of the largest in the world, has been under construction on the Volga river at Stalingrad in the Soviet Union, according to recent reports from Soviet sources. The work already completed includes approximately 970,000 cu. ft. of domestic structures and labour force amenities, as well as railway lines and motor roads. Other projects associated with the hydro-electric construction plan have been the laying of two high-tension cables across the Volga, the opening of several quarries, and the establishment of machine repair works, motor depots and other necessary auxiliary structures.

The building of the main hydro-electric station began last summer, with the busiest sites on Peshchany and Zelyany islands, where foundation pits are being excavated for the hydro-electric station itself, the spillway dam and the locks. More than 7,800,000 cu. yd. of earth have already been removed, with about 7,200,000 cu. yd. piled on cofferdams.

To the present time, excavation work in the foundation pits has been performed solely by suction dredges. One typical unit can shift more than 1,300 cu. yd. of spoil per hour. Excavation work is being completed by Uralets power shovels of 4 cu. yd. capacity, and by $\frac{1}{4}$ cu. yd. walking excavators. Subsoil waters provide a continual seepage, and 86 subsoil drainage pumps have been installed.

Machinery and Equipment

A Newly Designed Rock Drill

Presented by the manufacturers, Broom and Wade Ltd., as being efficient in operation with tungsten carbide bits, the Type CB 600 hand hammer drill is nevertheless stated to give improved performance over the old design of tool with normal carbon steel bits. The CB 600 has a bore of 2½ in., a stroke of 2 in., and with crossbar handle is 20 in. in length. It weighs 48 lb. and delivers 2,300 blows per min., and is fitted with a ½ in. air hose. Other statistics show that the CB 600 has a maximum bit diameter of 2½ in., and drilling capacities of 26 ft. in soft rock and 18 ft. in hard rock. At 80 lb. pressure, the unit uses 75 cu. ft. of free air per min. and has shank sizes of 3½ by ½ hex or ½ sq., or 4½ by 1 hex or 1 sq.

The unit is one of a range of four hand hammer drills, which cover all normal drilling encountered in quarrying, mining and rock excavation from plug and feather work to deep holing up to 30 ft. All machines in the range are fitted with a through flush device. In these "Broomwade" drills a one line construction is employed, side valve chest and other projections being eliminated. The backhead is an alloy steel forging with throttle integral, the manufacturers' patented plate valve is employed, the rifle bar has bearings both back and front, and the blowing device, or through flush, is an exhaust valve cut-off. During drilling sufficient air is allowed to pass down the flutes of the piston to the hollow drill steel to keep the hole clear of cuttings. The units may be used in combination with the "Broomwade" drilleg.

This accessory is built for two feeds of 39 and 51 in. Feed control is effected by pressure regulator which automatically maintains any predetermined pressure, between zero and the maximum, throughout the feed. This pressure may be increased or decreased at will by simple manipulation of the feed control. The 39 in. feed drilleg has a closed length of 61 in., an extended length of 100 in. and a net weight, including clamp, of 42 lb. The 51 in. feed drilleg has a closed length of 73 in., an extended length of 124 in., and a net weight including clamp of 47 lb.

Crawler Tractors for War Office

A new order for their 95 h.p. Challenger Diesel Crawler has been placed with the makers, John Fowler and Co. (Leeds) Ltd. by the War Office. The first machine was delivered after testing of prototypes in December, 1950. A similar machine was delivered two months later to the Military Experimental Engineering Establishment for further extensive testing by the War Office's specialists. On completion of these tests an order was placed for these machines fitted with hydraulic angledozer and winches. The new order is for the same machine fitted with hydraulic angledozer and Fowler logging winches, or alternatively hydraulic angledozer and P.C.U.s.

The company can offer four classes of diesel crawlers, ranging from 40 to 150 h.p. All these machines are in line production.

Since completion of the manufacturers' wartime tank production, more than 6,000 crawlers have been produced and are now in service in countries throughout the world.

Automotive Machine in Anthracite Mine

Glen Alden Coal Company, America, is testing a continuous coal mining machine in its Loomis colliery near Nanticoke, Pennsylvania. This is believed to be the first time that the automatic mining machine which digs coal from a seam and throws it on to a conveyor for removal from the mine, has been tested in an underground anthracite mine here. Officials of Glen Alden were guardedly optimistic after the first week's tests that continuous mining might help the hard coal industry.

Industrial Machine Tools

The new machine centre, opened by F. J. Edwards Ltd., at Islington, displays the stock of machine tools manufactured by the company, and machine tool catalogue MT 853 presents a full list of these equipments. The tools embrace a wide cross-section of smaller machinery, including bandsaws, furnaces, grinding machines, milling machines and twist drills. The catalogue, comprising some 50 pages is, well illustrated.

REVIEWS

The Northern Miner Annual Review, 1953.—Published by The Northern Miner in nine sections. Pp. 120. Price 20 c.

The rapid and comprehensive growth of the Canadian mining industry is admirably portrayed in the 1953 annual review number of *The Northern Miner*.

Published in nine sections, among the subjects considered are modern mining practice in the Canadian industry, the developments recorded in each province during the year ending, a review of the national minerals production which, it is estimated, will approach the level of \$1.3 billion this year, as well as alloys. In later sections, the business aspect of the mining industry and up to the minute news items are presented.

Outstanding factors among the excellent results achieved in 1953 are substantial gains by nickel and copper, with a record output for zinc. Gold, traditionally the major product of the Canadian mining industry, has now been exceeded in sale value by oil and nickel in that order. The editors of the review consider in addition that important gains may be expected for many of the minor minerals including tungsten, fluorspar, titanium, natural gas and magnesium.

Despite the setback that base metal mining has encountered through lower prices and the continued difficulties of the gold mining industry, many established mining companies are expanding while simultaneously many new projects are making progress towards the production stage. The year saw great activity in the search for new mines, and prospecting has been active all over the Dominion.

In all, this annual review beautifully produced and fully illustrated well enhances the reputation established by its predecessors.

Materials Survey, Bauxite.—Compiled for National Security Resources Board by the U.S. Bureau of Mines. Price \$1.50

This report is one of the series of basic surveys on various strategic and critical materials now under preparation in the United States. A general perspective of the place of bauxite within the domestic economy is provided in a review and analysis, while chapters in turn discuss the ores of bauxite and uses of end products, world reserves, production, distribution, mining, milling and processing, finally leading into interesting facts on the economic situation in so far as bauxite is concerned as well as the domestic structure of the industry and its political control.

Approximately four-fifths of the bauxite now consumed in the United States goes into metal production, and some 90 per cent of the alumina produced in 1952 was consumed in the manufacture of metallic aluminium; some 79 per cent of American bauxite production in 1952 therefore being used in metal production.

This comprehensive survey, loose bound and conveniently indexed, is illustrated by half-tones, maps and diagrams, and includes illustrative tabulated statistics of considerable value.

Materials Survey, Tin.—Compiled for National Security Resources Board by the U.S. Department of Commerce. Price \$4.25.

One of the same series as the bauxite survey reviewed above, this exceedingly comprehensive survey was prepared by the Division of Mineral Economics of the Pennsylvania State College under contract to the National Production Authority. Comprising full editorial data, maps, flowsheets and half-tones, the volume provides a relatively detailed textural and statistical study of the various phases and activities of the tin industry.

Chapters deal in turn with the physical and chemical properties of tin, the history of the metal, definitions of types of tin concentrates and metals, as well as the international considerations of world resources, estimated world reserves, and geological descriptions of the deposits of various countries. In more technical vein, there is currently discussed mining, beneficiation, smelting and refining, while later chapters subsequently consider the mining, smelting and general holding companies which operate the industry.

Full statistics on such matters as prices, stocks and consumption end a revealing document.

COMPANY NEWS AND VIEWS

Rand Dividend Season Closes

The dividend declarations announced by the companies in the Consolidated Gold Fields group and those in the Johannesburg Consolidated group completed the half-yearly dividend season of the South African gold producers.

The trend evinced by the companies in the other big mining groups and noted in these columns in last week's issue, was maintained and dividends for the most part were unchanged compared with the June payments. West Driefontein and Rietfontein in the Gold Fields group increased their distributions by 3d. and 1½d. respectively, though Sub Nigel paid 3d. less this time compared with its declaration of 4s. per share six months ago. West Witwatersrand Area also increased its payment from 9d. to 10½d.

In the "Johnnies" group, Randfontein and New State Areas paid the same as in June last, but Government Areas lowered its distribution by 3d. per share. Presumably East Champ D'Or is passing its dividend as this mine is not mentioned in the circular announcing the dividends of the companies in the "Johnnies" group.

Company	June (1952)	Dec. (1952)	June (1953)	Dec. (1953)
	s. d.	s. d.	s. d.	s. d.
Johnnies				
Govt. Areas	1 0	1 0	1 0	9
N. State Areas	4½	3	3	3
Randfontein	9	1 0	1 0	1 0
Gold Fields				
Libanon	3	3	3	3
Luipaards Vlei	7	7½	7½	7½
Rietfontein Con.	1 3	1 4½	1 3	1 4½
Robinson Deep	6	9	9	9
Simmer	3	4	4	4
Sub Nigel	4 0	4 0	4 0	3 9
Venterspost	6	5	5	5
Vlakfontein	8	8	6½	6½
Vogels	1 0	1 0	1 1½	1 1½
West Driefontein	—	—	6	9

Outlook for "Indians"

With only one more month to go before completing their financial results for 1953, the results obtained to date for the four Kolar Gold Field producers are disappointing.

Company	November, 1953			Current Financial Year		Last Financial Year	
	Tons (000)	Yield (oz.)	Months since year end	Tons (000)	Yield (oz.)	Tons (000)	Yield (oz.)
Champion Reef	14	5,709	11	125	49,253	141	62,565
Mysore	16	6,342	11	172	64,884	190	68,068
Nundydroog*	13	4,074	11	223	61,954	239	61,346
Oregum*	—	212	11	—	19,671	115	31,950

* Strike commenced November 13th. Yield includes tailings.

† Yield from Clean up only.

Champion Reef, despite a good monthly return, has recovered some 13,000 oz. less than in the corresponding period of the preceding year. Mysore, which started the year well and indeed, until May last produced more gold than in the corresponding period a year ago, now has no hope whatsoever of equaling last year's figures. Nundydroog, the one company which appeared likely to eclipse the preceding year's totals, experienced a strike on November 13 which accounts for its disappointing monthly return, so that after 11 months of the current year its total production figure is only slightly ahead of that achieved during the same period in 1952. Incidentally, later advices reported that work was resumed at Nundydroog on December 7.

Oregum, as previously announced, is committed entirely to clean-up operations and the probability is that next year's returns of the Kolar Gold Field producers will only refer to three producers.

West Africans in November

Bremang Gold Dredging, which is the only one of the ten West African gold producers listed in the table below nearing the end of its current financial year, has experienced its share of bad luck during the past eleven months. Dredging con-

ditions have not always been favourable; one dredge, currently being reconstructed on the Offin River, has not added to production totals while dredge repairs and overhauls have also consumed some valuable dredge working hours.

Ariston, which was singled out for comment on its last month's return, struck a bad patch and its November revenue was affected by the unusually low grade of ore crushed which was due to the available stoping faces yielding variable values. However, this is only a temporary setback and the company reported that the situation was not only in hand but that the average grade of ore sent to the mill so far this month has been better than the normal average grade.

Amalgamated Bantek's monthly return shows that the company is now reaping the benefits from having completed its aerial ropeway linking Fanti to the Central Mill and the tonnage crushed must be something of a record. Its cumulative total to-date after two months of its current financial year does not appear to advantage largely because in October revenue was adversely affected by the temporary low grade ore from the Pepe section.

Of the other producers, Gold Coast Main Reef continues to do well as does Taquah and Abosso, Lyndhurst Deep Level, and Marlu Gold.

Company	November, 1953			Months since year end	Current Financial Year		Last Financial Year			
	Tons (000)	Yield (oz.)	Profit (£'000)		Tons (000)	Yield (oz.)	Tons (000)	Yield (oz.)	Profit (£'000)	
A.B.A.	67	11,307	20.5	2	134	21,406	34.7	115	18,350	46.2
Ariston Gold.	31	9,634	36.0	2	62	19,708	85.6	60	20,361	104.2
Ashanti	24	15,247	59.0	2	48	30,484	129.1	44	29,500	152.7
Bibiani (1927)	29	6,340	7.8	2	59	12,655	15.7	62	12,066	22.7
Bremang*	442	2,464	10.3	11	6067	28,402	119.6	6,626	31,338	163.1
G.C.M.R.	9	3,642	9.3	5	45	18,372	57.3	42	15,881	47.9
Konongo	2	2,597	12.4	2	5	5,120	24.9	4	4,373	19.7
Lyndhurst Deep	0.8	1,226	5.9	2	2	2,398	11.6	2	2,161	10.4
Marlu Gold.	42	4,057	13.7	2	81	8,445	35	81	8,125	24.2
Taquah and Abosso	26	6,281	7.5	8	200	38,438	82.6	174	40,381	L49.8

* Including premium revenue since November 1951.

† Ore treated dredged in cu.yd. No. 1 dredge closed 7th Dec. ~L indicates a loss. As the basis of calculating monthly profits varies from company to company, a direct comparison one with another is not possible. The basis for any one company has, however, remained consistent unless otherwise indicated.

Oil Outputs for November

Trinidad Central Oilfields, whose consistently good production figures and steady improvement over the last three years was pointed out in these columns in our December 4 issue, has now declared an interim dividend of 7½ per cent against nil a year ago. With only one more month to go before completing its current financial year this company has recorded an improvement of some 22,000 tons over the corresponding period a year ago. Apex (Trinidad) is another oil producer which has raised its dividend payment and in the preliminary profit statement, published at the end of last week, a final payment of 2s. free of tax per 5s. stock unit was declared making a total distribution for the year ended September 30 last of 2s. 6d. free of tax, compared with 2s. 3d. free of tax, in 1951-52. Net profit, after all charges, including tax, was £584,206 compared with £547,660 in the preceding year.

The figures in the table below relating to Kuwait Oil are for October and, therefore, cumulatively represent 10 months' output and not eleven months as given in our issue of December 4. Lobitos Oil's cumulative total to-date is still some 21,000 tons up over the corresponding figures in the preceding year but those published for Ultramar show a disparity of approximately 33,000 tons compared with a year ago.

Company	November (in tons)	Months Since Year End	Cumulative (in tons)	
			This year to date	Last year to date
Anglo Ecuadorian	25,887	8	209,224	195,222
Apex Trinidad	36,501	2	73,830	74,209
Kern Oilfields	26,771	6	166,002	154,067
Kuwait Oil*	3,991,791	10	35,259,167	30,837,199
Lobitos Oil	39,473	11	426,524	405,528
Trinidad Central	8,385	11	89,418	67,253
Trinidad Leaseholds	73,983	5	375,233	366,465
Trinidad Petroleum	38,419	5	157,408	166,226
Ultramar Oil*	108,039	11	1,168,680	1,201,337

Note:- 1 ton taken to equal seven barrels

* Figures are for month of October.

† Output figures are for SAP Las Mercedes in which Ultramar holds a 50 per cent interest

Company Shorts

Roan and Mufulira May Raise Loan Interest.—Roan and Mufulira Copper Mines are to convene extraordinary meetings on January 5 next to submit resolutions to shareholders to increase from 4½ per cent to 5 per cent the rate of interest payable on outstanding loan stock to offset the effects of the lower Northern Rhodesian income tax as from the date of registration in Northern Rhodesia. In this connection the announcements state that if the Private Bill sanctioning registration of the companies in Northern Rhodesia, which it is hoped to introduce in the present session of the U.K. Parliament is passed in the normal way, the change is likely to take effect in the closing months of 1954.

Wankie Colliery to Transfer its Registration.—Wankie Colliery, whose control and management was transferred to Southern Rhodesia on March 31 last, has asked leave to introduce a Bill into Parliament, the object of which is to transfer the registration of the company to Southern Rhodesia. If the Bill is passed the effect would be that the company would become a Southern Rhodesian company, registered under the Companies Act, 1951, of that territory.

Zinc Corporation Joins in Oil Hunt.—The Zinc Corporation, one of Australia's largest mining companies, together with D'Arcy Exploration Company (a subsidiary of Anglo-Iranian) and Vacuum Oil Co. Pty. Ltd. (a subsidiary of the Standard Vacuum Oil Co. Ltd.) are the principal shareholders in Frome-Broken Hill Co. Pty. Ltd., which was formed in 1946 to explore for oil and gas in Australia. At the end of last week Sir Norman Michell, chairman of Consolidated Zinc, announced that the Frome-Broken Hill Co.'s capital would be increased to £100,000,000 in order to intensify the search for oil.

Dominion Reefs (Klerksdorp) Seek Increased Borrowing Powers.—Dominion Reefs (Klerksdorp) is convening an extraordinary general meeting on December 29—immediately after the annual general meeting—to submit a proposal to shareholders authorizing the company to borrow up to £2,500,000 exclusive of the £80,000 at present secured by bonds in favour of Dr. M. F. Braun. This will cover the company's capital expenditure involved in the acquisition and erection of the uranium production plant and ancillary requirements.

Waterval (Rustenburg) Platinum.—The net profit of Waterval (Rustenburg) Platinum Mining Company for the year ended June 30 last was £331,457, compared with £537,733. Accordingly, the total dividend distribution was reduced from 1s. 6d. to 1s. 3½d. per 2s. 6d. share on the £843,750 issued capital. This absorbed £435,938 (£393,750). The carry forward was £55,179 compared with £159,660 brought in. Mr. E. S. Hallett is chairman.

Klerksdorp Consolidated Gold Fields.—This company, which has just received permission to investigate the occurrence of uranium on its property, will hold its annual meeting on December 30, when Mr. A. H. Moreing, chairman and managing Director, will report on the latest position relative to the company's properties.

Sherwood Starr Still Searching.—Sherwood Starr Gold Mining, whose decision to liquidate was defeated at an extraordinary general meeting on April 15 last, has now published its report and accounts for the year ended June 30, 1953. The feature of the accounts is that the assets of the company have been assessed and that the board are still looking for a suitable venture in which to employ the company's resources. Mr. Bailey Southwell is chairman.

Weak Asbestos Markets Hurt New Monteleo.—Mr. J. Robinson, chairman of New Monteleo, in his statement to shareholders said that the major portion of the company's capital was invested in asbestos projects and the recent recession of this industry, which resulted in placing Rhomonte and Biltong asbestos mines on a care and maintenance basis, was a grievous blow. Moreover, he added, the market for industrial land was completely stagnant during the year ended June 30 which meant the loss of considerable revenue and no change could be expected in the immediate future. The company's untaxed profit for the year ended June 30 last was £35,884, a steep decline from last year's figure of £87,137. Meeting, Johannesburg, December 30.

Transvaal Delagoa Bay Pays More.—Transvaal and Delagoa Bay Investments Company, in respect of the year ended August 31 last, distributed a total of 9s. 6d. per £1 share on the £360,750 issued capital, equivalent to 47½ per cent, which compares with 30 per cent paid in the preceding year. Profit for the year amounted to £175,234. The total distribution of 9s. 6d. per share took £171,356, the sum of £210,000 was allocated to general reserve and the carry forward at the end of August last was £12,913.

Sione Tin to sell its Leases Outright.—Sione Tin (F.M.S.) which had been looking around for some time for someone to work its property, some eight miles north of Kuala Lumpur, has given up this idea and has now decided to sell the property, even though "the best offer received for the land is disappointingly small." Accordingly, the board proposes that the company be liquidated and to effect this decision an extraordinary meeting will be convened as early as possible. Mr. W. A. Fell is chairman.

Sungei Way to Hold Extraordinary Meeting.—Sungei Way Dredging, which is incorporated in Malaya, will hold an extraordinary general meeting on December 29 to seek shareholders' consent for the company's capital to be increased to \$3,000,000 by the creation of 1,000,000 new shares of \$1 each.

Tongkah Harbour Tin Dredging.—This company's net profit for the year ended June 30 last, after tax and all other provisions, was £76,609 against £68,755. The total dividend distribution was 2s. (2s. 3d.) per 5s. share, and the carry forward was £162,335 against £139,206. Mr. D. T. Waring is chairman. Meeting, Kuala Lumpur, Malaya, December 23.

Bolivian and General Make Small Profit.—Bolivian and General Tin Trust, which is interested in tin mining properties in Bolivia and holds a controlling interest in Fabulosa Mines Consolidated, declared a net profit for the calendar year 1952, after providing for all charges, including taxation, of £2,196, compared with £2,387 in 1951. The forward balance at the end of 1952 was £29,587, compared with £27,391 brought in. Mr. L. S. Marks is chairman.

Rosterman Gold Incurs Loss on Year's Operation.—A loss of £40,464 was incurred by Rosterman Gold Mines on its operations during the calendar year 1952. The directors state that owing to the high cost of working expenses in relation to the small quantity of gold produced the company closed its mine down in April, 1952, which accounts for the above mentioned loss. Mr. A. H. Moreing, chairman, will give a full account of the company's activities at the annual meeting to be held in London on December 31 next.

Bechuanaland Exploration Pays 2½ Per Cent More.—The net profit of the Bechuanaland Exploration Company for the year ended March 31 last, was £23,148 against £25,557. The allocation to general reserve was maintained at £10,000, the stepping up of the dividend from 5 per cent to 7½ per cent per 10s. share on the £300,887 issued capital absorbed a net £12,412 (£7,898), leaving £18,749 (£18,013) to be carried forward. Mr. Percy J. Warner is chairman. Meeting, London, December 31.

Tanami Gold Shows Small Profit.—Tanami Gold Mining Syndicate, which holds 3,000 "A" shares in Dominion Reefs (Klerksdorp), announced a profit for the year ended April 30 last of £533, against which has been written off reorganization expenses amounting to £375, leaving a balance of £158 to be carried forward. The company also owns a substantial interest in Rosterman Gold Mines. Captain A. H. Moreing is chairman. Meeting, London, December 29.

Starr Explorations Shows Small Improvement.—Starr Explorations report a consolidated net profit for the year ended October 31 last, of £13,440 (£12,837) which was increased to £23,268 as a result of depreciation of quoted investments and writing back depreciation in respect of sales of investments. Mr. M. Woodbine Parish is chairman and managing director. Meeting, London, December 31.

Edjudina Consolidated Reports Loss.—Edjudina Consolidated Gold Mines have announced a loss of £1,072 for the year ended June 30 last, bringing the accumulated balance to the debit of the profit and loss account to £25,315. Its subsidiary company, Paget Gold Mines of Edjudina, is in liquidation. Meeting, London, December 30.

Mining Men and Matters

The Institute of Metals: Award of Medals.—Dr. Leslie Aitchison has been awarded the Institute of Metals (Platinum) Medal in recognition of his services to Metallurgy in industry, in education and in public service. Professor Alan Howard Cottrell (Professor of Physical Metallurgy, University of Birmingham) has been awarded the Rosenhain Medal in recognition of his outstanding contributions to knowledge in the field of physical metallurgy, with special reference to the deformation of metals.

Mr. Michael Thomas Easby has joined the Board of Kentan Gold Areas.

Mr. E. G. C. Mardall, former assistant managing director of Trinidad Leaseholds, has been appointed joint managing director with **Mr. A. J. Ruthven Murray**, the present managing director.

ESPERANZA COPPER AND SULPHUR

MR. HEDLEY WILLIAMS'S REVIEW

The annual general meeting of Esperanza Copper and Sulphur Company, Ltd., was held on December 18, at Winchester House, London, E.C.

Mr. A. Hedley Williams, M.Inst.Pet., A.M.I.M.M., chairman of the company, presiding said: I am glad to be able to give you the up-to-date position, which I hope and think you will find satisfactory.

Information conveyed to you at our annual general meeting on February 23 last and the regularly circularised reports of our subsidiary, the Cyprus Sulphur and Copper Company, Ltd., have indicated to you that good progress has continued to be made and that results of trading have been satisfactory with the able services of the British Metal Corporation, Ltd.

The Cyprus Company's Board is composed of men of first-class standing and experience and they have done a fine job of work under the able chairmanship of the general manager of the mines, Mr. L. R. Jackson.

Mr. H. C. Robson, A.C.S.M., M.I.M.M., is directly responsible for the erection of the new treatment plant, and I cannot speak too highly of the services he has rendered and is continuing to render.

Mine preparation and mill erection work at Limni, have been so ably carried out locally that they have always been well ahead of schedule. It is only because of some recent delays as regards deliveries of certain items of key plant and equipment and the need to await results of final research work carried out to ensure maximum recovery of the valuable gold and silver content, that I am not able to tell you that they will attain the ambitious and exceptional target of having the major part of the new plant working within nine months of commencing designs. Even so, the general manager informs us that he hopes to attain an initial production in the early part of next month.

I feel confident members will agree their interest is being well served.

TWO IMPORTANT CONTRACTS

I am happy to tell you that our subsidiary has entered into two important contracts. The first one is a three-year contract for the sale to German buyers of run-of-mine Kinousa ore. This ensures not only substantial additional revenue to the proceeds from the new mill treating Limni ore, but allows for systematic planning for some years ahead of mining and development work.

The second contract is for the sale of the whole of the estimated pyrites sulphur concentrates accruing from treatment in the new mill in 1954.

In addition, no difficulty is anticipated in the ready sale during 1954 of the copper-gold concentrates from the same mill.

To ensure more efficient and economical handling of ore shipments, modifications to the present jetty are in hand.

You have been informed that there has been a new development of considerable promise in the Evloimeni Area, which is some 1½ miles distant from Kinousa and about 1 mile from the Limni Opencast.

At Evloimeni rich cupriferous pyrites, of a value similar to the exceptional ore found in Kinousa, has been encountered in the extension of an old Roman shallow working.

Preliminary work, including a road to the first selected drilling site, has already been carried out in order to make certain that development in the early New Year will not be delayed. It is also intended to make a geophysical survey of this extensive area.

Regarding exploration and development of the Concession in general, I want to point out that not only should the Kinousa Area be further and extensively developed, as well as Limni and Evloimeni, but there are also intervening areas which are ripe for investigation.

For the current year ending March 31 next, 33,500 tons of Kinousa cuprous ore have been sold, of which 22,450 tons have been shipped.

During the year, two of your directors, namely Lt. Col. J. H. Levey and Mr. P. A. Ashmead-Bartlett, have visited the Cyprus property and these visits have proved most helpful.

I am sure you will all wish to join me in thanks to the general manager and the staff of our subsidiary company for the exceptionally good work they have carried out in Cyprus during the year under review. I can assure you that they have not spared themselves and that our very best thanks are due to them.

I hope the foregoing will be helpful to you as an appreciation of the position.

The reports and accounts were adopted.

THE LAMPA MINING CO., LTD.

The 47th Annual General Meeting of the Lampa Mining Co. Ltd., was held at the Exchange Hotel, Liverpool 2, on December 17.

The following is an extract from the statement by the Chairman, **Mr. J. Shirley Esplen**, circulated with the report and accounts for the year ended June 30 last.

The charge which has been put through our smelters during the year has been increased by about 2,000 tons. On the other hand, the copper and silver content of each ton of charge continues to show a decline so that in spite of the considerable increase in the total tonnage put through, the actual amount of fine copper and fine silver entering the furnace was only very slightly greater than last year. Turning next to the smelter output, the tonnage of Matte has increased by 86.7 tons. However, once again the copper and silver assay per ton of Matte shows a decline, so that the total values of copper and silver recovered in the Matte only show a small increase on last year. It is gratifying to observe that in each case the percentage recovery of copper and silver has improved by about 1 per cent. Costs have risen throughout the year and this is evidenced by the fact that in spite of the increased output, the cost per ton of Matte at port of shipment has increased by over 7 per cent. Fortunately for our Company, the value realized per ton of Matte has also increased to a slightly greater extent, and as a result there is a small improvement in the realized surplus per ton of Matte.

The rise in the value of our Matte has been largely due to the increased price of copper which we enjoyed during the financial year.

In May of this year for the first time, after a lot of preliminary preparations, we were able to work two smelters simultaneously for the whole month. As a result our production of Matte for that month reached 152 tons. Since June 30, we have found it possible to work two smelters together again during July and September, and this has resulted in a production for July of 172 tons of Matte, and 183 tons in September, a record for the Company since smelting commenced. This compares with an average production of 80 tons of Matte per month when only one smelter is working. We are hoping that it may prove possible to maintain double smelting during each alternate month. Naturally during the months when we can obtain this production, it has the effect of reducing the production cost per ton of Matte, because our heavy overhead expenses then become divisible by a much greater tonnage. On the other hand in order to keep the furnaces supplied with sufficient ore for double smelting, we have to accept a drop in the minimum grade produced from the mine.

All this will make it clear to the shareholders that the sooner we can commence profitable operations on the new Segregation Process, and the sooner it can be proved thereby, that we can profitably handle a lower grade of ore which at present would not pay to smelt, the sooner we may cease worrying about our future supplies of ore.

This brings me to our new project, the Segregation Plant. Last year I told you that our hope was that this plant would be in action by the time we met again. Like so many hopes of this nature it has proved too optimistic. As the process of designing the plant and ordering the equipment went on, we found the necessity for more ancillary items than we had foreseen. Also we have experienced with some important items such as the calcining furnace and the flotation machines far more delay in completion and delivery than we had grounds for expecting. Good progress has been made at the mine in preparing the site and laying the foundations and in erecting the plant which has arrived there. But I do not wish to run the risk of raising your hopes by again quoting an early date which might prove premature, so I prefer to say that on this occasion I really do hope that by this time next year, the plant will be complete. As a corollary to what I have said about increased ancillary equipment and so on, I feel that I ought to raise the estimated figure of the total cost of the 50 ton plant from £15,000 which I mentioned last year to £20,000.

Turning to the accounts the Trading and Profit and Loss Account shows a moderate increase in net profit compared with the previous year, but the amount available for disposal has been increased also by the substantial sum of £5,500 being provision for British Taxation in former years now judged to be in excess of requirements, the E.P.T. Post-war Refund of £2,731 already mentioned and a fortuitous profit on exchange of just over £1,000. This has enabled the Directors to increase the Final Dividend to 10 per cent, less tax, making 15 per cent, less tax, for the year.

The report and accounts were adopted.

At a subsequent Extraordinary General Meeting resolutions were passed converting all the issued capital into stock.

CONSOLIDATED AFRICAN SELECTION TRUST

TAXATION PENALIZES EFFICIENCY

The twenty-ninth annual general meeting of Consolidated African Selection Trust, Ltd., was held on December 21 in London.

Mr. A. Chester Beatty, Jnr., the chairman, in the course of his speech, said :

Gold Coast.—Caratage production from our Gold Coast mines was about the same as in the previous year, but we had to treat a far greater yardage so that our costs were considerably higher. The price secured for our diamonds, however, showed an improvement so that the net out-turn was slightly higher at £951,000. In the first full year of the application of the new Minerals Duty which is not susceptible of Double Taxation Relief, this Duty and Concession Royalties took £250,000, other taxation in the Gold Coast required £335,000 and the United Kingdom tax applicable to the Gold Coast operations was £128,000, so that the profit was reduced to approximately £240,000. We have felt it proper to allot £150,000 to the Reserves for Replacements and Extensions of Fixed Assets and for Prospecting and Development, so that the contribution of our Gold Coast operations to our surplus available for distribution amounts to £90,000. There is a grave warning in these figures for those considering investment in overseas territories, where capital and technical skill are required to develop natural resources. Furthermore, the present tax system directly penalizes efficient operation since a reduction in costs results in a still more catastrophic rate of Minerals Duty.

The shareholders of this company have shown in the past that they were prepared to provide risk capital and no doubt they might be inclined to do so in the future. But since they have to bear the loss if a venture does not succeed, they must, if they are fortunate, be allowed a fair return. Nor is it reasonable that they should have their burden of taxation increased by a tax that is not only not allowable for Double Taxation Relief but that increases directly in proportion to the efficiency of their operations or the richness of the deposit discovered. The matter will be discussed with the appropriate authorities who, it is hoped, will fully realize the importance of this and other similar companies' efforts to develop resources in the Empire.

It is evident that the present tax position sharply jeopardizes our plans for the development and expansion of our operations.

SIERRA LEONE

The production of diamonds suffered very seriously from the full impact of illicit mining and theft to which attention was drawn by the Chairman last year. We estimate that sales in the year were reduced by something like £430,000 as a consequence. The Sierra Leone Government have been collaborating wholeheartedly with us in efforts to combat these illicit degradations and we are achieving a measure of success.

I take this opportunity of advising stockholders that, since the end of the financial year, the Sierra Leone Government has requested us to join in negotiations for a revision of the terms of the Exclusive Licence Agreement, under which our subsidiary company operates in that territory. Conversations have taken place in a friendly atmosphere and there is every reason to believe that a satisfactory solution will be reached.

The report was adopted.

PAHANG CONSOLIDATED

The Forty-seventh Ordinary Annual General Meeting of The Pahang Consolidated Company, Limited, was held on December 17 in London.

The following are extracts from the circulated address of the Chairman, **Mr. D. T. Lewis**.

In Myah Main Lode Series a new lode has been exposed which has so far yielded good payability and shows some promise of persisting in depth. Development on the 1,200 ft. level Willink's was suspended while the new shaft was being sunk to 1,300 ft. level. On resumption results on the 1,200 ft. level were at first disappointing but have since become more promising. On the 1,300 ft. level cross cutting towards the lodes has commenced. Exploration of Myah Main Lode below No. 11 Level by means of diamond drilling initially failed to yield positive results but later results are more favourable. Preliminaries to diamond drilling are also being carried out at Gakak Creek so that when the necessary military escort is made available serious work can be proceeded with.

In view of the increase in cost of nearly £17 per ton concentrate produced and the decrease in net realization of over £60, the result for the year's working may be considered not unsatisfactory. The drop in the balance on working account from £844,027 to £590,756 reflects these trends.

Last year at this time our late chairman said that 1951-52 was a year of consolidation, now we can report that the mines are producing a regular output of 220 tons tin concentrates per month, the mining and crushing of which shows a slight increase in cost of 95 cents per ton on the 173,000 tons of ore crushed against \$4 increase last year. The cost of development has also increased by \$2.31 (5s. 5d.) per foot for a lower footage. The total royalty payable to Government on the realized proceeds was £120,430.

A referendum taken in Malaya of tin producers resulted in about 74 per cent. voting in favour of advising interested Governments to recommend reconvening the United Nations Commodity Conference on Tin. This company voted against this as any form of restriction of output would be uneconomic when, as on this big lode mine, we are confronted with the necessity of maintaining a large skilled force of hard rock miners and of handling a pumping problem of considerable magnitude, both of which involve heavy overhead costs.

The directors recommend final dividends of 11½ per cent. on the Preference and 30 per cent. on the Ordinary stock.

DIVIDENDS

Anglo-Huronian 25 c. (January 26)
Beralt Tin and Wolfram 50% *i* (January 26)
Central South African Lands Mines 7½% *i* (February 12)
London and Rhodesian Mining and Land 6% *i* (February 25)
Lydenburg Platinum 9% *i* (February 9)
Malayan Tin Dredging 20% *i* (January 26)
New Kleinfontein Co. 5½% (February 9)
Rooiberg Minerals 37½% *i* (February 9)
Southern Malayan Tin Dredging 20% *i* (January 22)
Selection Trust 12½% *i* (January 23)
Transvaal Navigation Collieries 5% *i* (February 9)
Vereeniging Brick and Tile 12½% (February 17)
Village Main Reef Gold 10% *i* (February 8)
Witwatersrand Nigel 5% (February 9)

i interim

WILFLEY

JAW CRUSHERS

BALL MILLS

CONCENTRATING TABLES

CENTRIFUGAL SAND PUMPS

MACE SMELTING FURNACES

MACE SINTERING HEARTHS

THE WILFLEY MINING MACHINERY CO. LTD. Salisbury House, London, E.C.2

TELEPHONE MANSION HOUSE 1674

TELEGRAMS "WRATHLESS, LONDON"

TRONOH MINES LTD.

MR. J. H. RICH ON TIN CONTROL

The fifty-first annual general meeting of Tronoh Mines, Ltd., was held on December 18, 1953, in London.

Mr. J. H. Rich, Chairman of the Company, presided, and the following is an extract from his circulated statement:—

As regards the future outlook for tin, the market at the time of writing is suffering from a lack of confidence resulting in a depressed price. Contributory causes for this are the Korean truce, the persistent references to a surplus of 40,000 tons, and the possibility of a trade recession in the U.S.A. It is not surprising that in these unfavourable circumstances consumers should confine their purchases to their bare requirements. Providing there is no serious falling off in American productivity the existing period of low prices may, I think, be regarded as a passing phase. One favourable feature is that the production of tin has reached its peak, and, in fact, unless new fields are found production will tend to fall while statistics show that the general trend of consumption is upwards.

The recent heavy drop in the metal price has revived interest in the controversial subject of an International Tin Control Agreement and an International Conference is meeting in Geneva to consider the possibility of achieving this. It is claimed that under such an agreement stable conditions would result, enabling companies to plan ahead and that unemployment would be eliminated. It is interesting to see how far these claims can be substantiated in the light of the experience gained during the ten years prior to the war when a Control Scheme was in operation. First let us see how far stable conditions resulted under the previous scheme. Under that scheme, and presumably the same conditions would apply under any other Control Scheme, each participating country was allotted a tonnage assessment and in the case of Malaya that tonnage was distributed in the form of domestic assessments to the several hundred producers in the country. An integral part of any Control Scheme is the Quota Release, which is the percentage of the tonnage assessment permitted to be produced during a given period, the claim being that by this means the price can be stabilized.

During the ten years in which the previous Control Scheme operated the average annual Quota Release in Malaya varied from 24.33 per cent. to 88.75 per cent. and during the same period the price of tin varied from £118.5 to £242.3 per ton as shown in the Statistical Year Book for 1952.

These figures clearly show that the last Control Scheme failed to produce any stability of either production or price.

Further, owing to the tonnage assessment previously referred to and the permissible sale of quota, any new mine could only be operated at the expense of existing producers and it was on this account that the Malayan Government refused to issue any Prospecting Licences.

This prolonged lack of prospecting is now the grave concern both of the Government and the industry and it is pertinent to enquire what would be the attitude of the Government to prospecting in the event of a new Restriction Scheme coming into operation.

In view of these facts it is difficult to understand how it can be claimed that a Control Scheme would enable mining companies to plan ahead and enter into Capital Commitments.

What mining concern would be prepared to put up from three-quarters of a million to a million pounds to develop and equip new property knowing that its production would be compulsorily controlled and that the plant might only be in operation for three months in the year, as was the case of one of the Associated Companies of this Group under the former Control Scheme? The threat inherent in any such scheme is bound to act as a deterrent to the development of new areas, to the detriment not only of the industry but to the economy of the country as a whole.

As to the claim that unemployment would be eliminated, it is only necessary to refer to the Annual Report of the Chief Inspector of Mines for the year 1938, in which he says that many of the mines were closed down owing to the low quota release, resulting in some 30,000 workers being discharged and calling for an expenditure of some \$600,000 by Government in unemployment relief work.

Despite claims to the contrary, the results of the previous Control Scheme clearly show that it did not produce the stability claimed and there is nothing to indicate that conditions have so changed as to produce any other result from a new control agreement.

JANTAR NIGERIA COMPANY

The forty-first annual general meeting of Jantar Nigeria Co., Ltd., was held on December 22 in London.

Mr. C. A. P. Tarbutt, chairman, presided and the following is an extract from his circulated statement.

Output for the year ended September 30, 1953, was 212 tons tin and 210 tons columbite. This was 46 tons tin and 4 tons columbite less than in the previous year.

The price of tin having fallen sharply during the year, preference has been given to the production of columbite.

The columbite contract for the calendar year 1953 was renewed with the American buyers on the same basis as that offered at that time by the American Defence Materials Procurement Agency. This is equivalent to a price of £1,051 per ton at the average assay for the year of 65 per cent. To this should be added the bonus of 100 per cent. payable by the Defence Materials Procurement Agency, making a total of £2,102 per ton.

In my speech last year I said that 148 tons of the 1951-52 output would qualify for the bonus. Owing to the method by which the Defence Materials Procurement Agency's order was implemented, against which there was no appeal, the bonus was only received on 108 tons.

Of the current year's output of 210 tons columbite, bonus payments for only 54 tons were received before September 30, 1953.

The operating profit amounts to £97,762. This represents the profit made on the year's output before crediting any columbite bonus, and is the figure which should be compared with last year's operating profit of £193,834.

The amount of columbite bonus received during the year was £169,005, which is shown at the credit of the profit and loss account, less £31,982, which was the increased amount we have had to pay in royalty. The price on which royalty is based includes the Defence Materials Procurement Agency bonus, and is calculated on a sliding scale.

The net profit for the year is £69,610, against £66,214 for the year to September 30, 1952. A dividend of 1s. 3d. per stock unit, less income-tax at 9s. is recommended, leaving £1,547 to be carried forward.

The report and accounts were adopted.

CONSOLIDATED TIN MINES OF BURMA

The twenty-third annual general meeting of Consolidated Tin Mines of Burma, Ltd., was held on December 18th in London.

Mr. W. J. C. Richards, chairman of the company, presided, and in the course of his speech said:—

The deplorable conditions which have prevailed in that part of Lower Burma in which our mines are situated have persisted. We remain virtually dispossessed of our mining properties, and our general manager and other British employees have not been permitted to visit the mines since January, 1950.

The report and accounts for the year ended March 31st, 1953, shows there has been a welcome increase in the capital reserve which is due to certain capital receipts during the year, the chief item being the recovery of £33,946 in respect of the company's claim for concentrates extracted by the Japanese and recovered on the reoccupation of Lower Burma. There has also been a small and final ex gratia payment of £530 from H.M. Government for capital rehabilitation.

Stocks of concentrates at March 31st last were considerably higher than in the previous year but I am pleased to be able to tell you that these stocks have since been realized profitably.

The group profit for the year of £30,812 compares with £13,181 for the previous year. This is a creditable achievement as the price of tin and wolfram followed a downward course throughout the year.

The improved results enable the Board to recommend a dividend of 7½ per cent., less tax at 9s. in the £.

The Government of the Union of Burma has suggested that the tin mining companies operating in Lower Burma should combine and enter into a joint venture with Government. The discussions so far have been no more than exploratory and your directors have intimated that they are willing to consider Government's proposals. The terms must, of course, be equitable and acceptable to mine-owners and there is no reason to suppose they will not be.

Our subsidiary—Mineral Products, Ltd.—has again had a profitable year's trading and, although a reduced dividend was paid, the undistributed profits were increased by £1,300.

The report and accounts were adopted.

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